

**GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA**

UNSTARRED QUESTION NO:2146
ANSWERED ON:02.12.2002
ENGAGEMENT OF AGRICULTURAL SCIENTISTS
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Will the Minister of AGRICULTURE be pleased to state:

- (a) the total number of scientists engaged in the field of agriculture and the total amount spent thereon during the last two years;
- (b) the details of inventions/discoveries made by them during the said period; and
- (c) if not, the reasons therefor and the reaction of the Government thereto?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI HUKUMDEO NARAYAN YADAV)

(a) The total number of scientists engaged in the field of agriculture is 5324. Besides their salaries, the total amount spent on research was approximately Rs. 549 and Rs. 684 crores during the years 2000-01 and 2001-02, respectively.

(b) Salient achievements Annexed.

(c) Does not arise.

Annexure

SALIENT ACHIEVEMENTS

2000-2001

More than 135 high yielding and disease resistant varieties/hybrids of various field and horticultural crops were released for various agro-ecoregions and production systems of the country. This was supported by the generation of the appropriate agro-techniques including more remunerative cropping systems having economic viability in different agro-ecoregions. A total of 2,413 tonnes of breeder seed was also produced, which included, about 55 tonnes of vegetable seed. More emphasis was given on the development of farm machinery and post-harvest technology, and on-farm and off-farm value-addition, processing and storage. Significant achievements included development and evaluation of farm equipment - till plant machine; seed-cum-fertilizer drill; lowland rice drum seeder; pneumatic seed planter; sugarcane sett-cutter planter; potato planter; mechanical vegetable transplanters; aeroblast sprayer; sprayer attachment for coconut and arecanut crops; boom sprayer; pigeonpea and sunflower threshers; vegetable washing machine and sugarcane trash shredder.

In the livestock and poultry improvement and management, livestock census databank was integrated with information system on Animal Genetic Resources of India and made available on CD medium, a data information system on the feed and animal resources of India was developed, and efficient techniques for micro-satellite DNA markers monoclonal antibody kits, diet supplements and semen preservation were developed. In the fish improvement and management, Indian catfish was successfully crossbred with African catfish, besides development of various fish production and processing techniques.

Establishment of 40 Agricultural Technology Information Centres, remandating of 53 Zonal Research Stations to function as Krishi Vigyan Kendras and expansion of Institution village Linkage Programme (IVLP) have been Council's priorities for strengthening transfer of technology. The capacity of different State Agricultural Universities was increased through the establishment of new branches and with the improvement upon the existing infrastructure. The Rural Agricultural Work Experience (RAWEX) was also introduced in the agricultural curriculum.

2001-2002

More than 84 high-yielding and disease-resistant varieties/hybrids of various field crops, and 78 varieties/hybrids of horticultural crops including fruits, vegetables and floriculture, were released for various agro-ecoregions and production systems of the country. This was supported by the generation of the appropriate agro-techniques. Promising major crop-based cropping systems, having economic viability in different agro-ecoregions, have been evolved, keeping in view the resource availability and its efficient utilization. Under plant genetic resources, 16,597 accessions comprising cereals, millets, minor millets, pseudocereals, pulses, oilseeds, fibres, vegetables, fruits, medicinal and aromatic plants, spices and condiments and others were collected. A total of 15,876 samples of

diverse crops from 40 countries and 50,230 samples of international trials were introduced. Through quarantine clearance, 41,229 samples were imported and 2,693 exported. Soil map of country on 1:1 million scale, state map on 1:250,000 scale and several district soil maps on 1:50,000 scale have been prepared. Soil degradation map of the country on 1:4.4 million scale has also been prepared. Twenty agro-ecological regions and sixty agro-ecological sub-regions of the country were delineated based on the physiography, soil, climate, length of growing period etc. Water-use efficient irrigation schedules and methods (including micro-irrigation) for major crops were evolved that resulted into considerable saving of irrigation water and increase in crop yields. More emphasis was given on the development of farm machinery and post-harvest technology, and on-farm and off-farm value-addition, processing and storage.

In the livestock and poultry improvement and management efficient techniques for micro-satellite DNA markers, monoclonal antibody kits, diet supplements and semen preservation were developed. In the fish improvement and management, identification and cataloguing of potential ornamental fish species, health assessment index for rapid evaluation of fish condition in field, spawning Asian catfish spontaneously, and domestication of tiger shrimp were achieved. Strengthening of eight Zonal Coordinating Units and 29 Directorates of Extension Education at the State Agricultural Universities by providing modern IT facilities, and approval for the start of four new Agricultural Technology Information Centres (ATICs) are significant under Innovations in Technology Dissemination programme of the National Agricultural Technology Project (NATP).

Successful advances have thus, been made in research, extension and education in crops, horticulture, natural resource management, livestock, and fisheries to address the multiple and interwoven problems associated with food and nutritional security, such as enhancing productivity, sustaining production, protecting environment, conserving natural resources and improving profitability of farming as an occupation.